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MEMOIR

OF

THADDEUS WILLIAM HARRIS.

BY THOMAS WENTWORTH HIGGINSON.

BOSTON:
1860.

Mr Hodges.
with the kind Regards of
Mrs Harris.

MEMOIR

OF

THADDEUS WILLIAM HARRIS.

BY THOMAS WENTWORTH HIGGINSON.

BOSTON:
1869.

From the Occasional Papers of the Boston Society of Natural History,—I,

pp. xi—xlvii.

PRESS OF A. A. KINGMAN,
MUSEUM OF THE BOSTON SOCIETY OF NATURAL HISTORY,
Berkeley Street.

MEMOIR

OF

THADDEUS WILLIAM HARRIS

BY

THOMAS WENTWORTH HIGGINSON.

"Were I to be required to say, in one word, what is the system of Nature, I should say — Variety."

Dr. HARRIS to EDWARD NEWMAN, 1844.

ONE of the ablest of American botanists writes in respect to Dr. Harris, — "Of other genuine naturalists I have read, but he is the only one I ever knew." This is hardly too strong a statement of the loyalty entertained toward this eminent man by those who had the privilege of being his pupils in Natural History. In him there lived for us the very spirit of Linnæus, or whatever name best represents the simplest and purest type of the naturalist. The personal attachment thus won, the healthy influence thus exerted, and the slow and gradual recognition of the merit of his methods, are a form of success more congenial to the temperament of Dr. Harris than would have been any more immediate and superficial applauses.

Thaddeus William Harris was born in Dorchester, Mass., November 12, 1795. He was the son of Thaddeus Mason Harris, D. D., and Mary (Dix) Harris. The elder Dr. Harris was a native of Charlestown, Mass., born in 1768, graduated at Harvard College in 1787, and was librarian of that institution from 1791 to 1793. He left that position to be ordained over the First Congregational Church in Dorchester, where he remained until within a few years of his death, which occurred in 1842. I remember in my boyhood the little quaint old man, bent almost incredibly, but still wearing a hale aspect, who used to haunt the alcoves of the old library in Harvard Hall. It was rumored among us that he had once been appointed private secretary to Washington, but had resigned from illness; and it was known that he was arranging and indexing for Mr. Sparks the one hundred and thirty-two manuscript volumes of Washington's correspondence. He was not without his poetic laurels, too, since it was whispered that he had composed for Mr. Everett's youthful recitation the verses:

> "You'd scarce expect one of my age
> To speak in public on the stage."

He was, moreover, a learned antiquarian and divine, and had come to Natural History by a strictly professional path; for besides his proper harvest of fifty-eight occasional sermons, and seventeen other publications,[1] he had found time for an elaborate "Natural History of the Bible," which was published in 1820, and long remained a standard work,

[1] See a list of them in an admirable memoir of the elder Dr. Harris, by N. L. Frothingham, D.D., in the Mass. Hist. Coll., 4th series, II, 130.

both here and in Europe. It aimed to describe and identify every animal, plant and precious stone mentioned in Scripture; and must have involved, on many of these points, enough of minute investigation to enlist the whole family in the work. And as Mrs. Harris was at the same period a diligent rearer of silkworms, and supplied herself for ten years with sewing-silk from their labors, it is evident that Natural History must have been a topic of habitual household interest. It is certain that at this time (1820), the younger Dr. Harris began his permanent collection of insects.

He entered Harvard College in 1811, in his sixteenth year, and graduated, with respectable rank, in 1815. One of his classmates describes him as "a timid, sensitive, rather nervous and recluse youth," who was not at that time conspicuous for his love of Natural History. There was a college society, called first the "Lavoiserian," and then the "Hermetic," for the study of Natural Philosophy, and especially of Chemistry. It is very probable that Dr. Harris was inclined to this last study, as he was appointed, some years after his graduation, a member of the Examining Committee in that department. But the college afforded no direct instruction in Natural History at that time, except in the lectures of Prof. W. D. Peck. These were accessible by a special fee, and do not seem to have left a very palatable impression on those who heard them. Dr. Harris, however, attributes to Dr. Peck his first interest in his favorite study. "It was this early and much esteemed friend who first developed my taste for entomology, and stimulated me to cultivate it." This probably refers, however, not to college days but to a renewal of intercourse with the Pro-

fessor, about 1820. Prof. Peck died two years later, and his manuscripts were submitted for examination to the two Doctors Harris, who reported adversely to the publication, finding them apparently correct and faithful, but a little behind the times. Yet Prof. Peck was reputed a man of real science in his day, and a recommendation of him by Sir Joseph Banks used to be quoted. His only memorial now remains in the baptismal name of one minute insect, the Xenos Peckii of Kirby, which as being at that time the only species of its genus, and the only genus of its order, represented in a certain degree the very aristocracy of science.

After his graduation Dr. Harris devoted himself to the study of medicine, took his medical degree in 1820, and entered on the practice of his profession at Milton, in connection with Dr. Amos Holbrook, whose daughter (Catherine) he afterwards married. Dr. Holbrook was an eminent practitioner in his day, being Vice-President of the Massachusetts Medical Society, and Corresponding Member of several foreign associations. After two or three years, Dr. Harris took an office for himself in Dorchester Village, near Milton Lower Falls. I do not know how far he became really attached to his profession; he never refers to it in his correspondence, and seems to have entirely quitted it after his academical appointment, except when he once took for a few weeks the practice of Dr. Plympton, during the illness of that well known Cambridge physician. It was while he was a resident of Milton and Dorchester that the greater part of his out-door researches in entomology must have been made. Yet he wrote to Prof. Hentz (June 5, 1829) that he "had but very little time to devote to the

study of insects." "My leisure moments," he adds, "are principally employed in collecting and preserving such as I can discover, in order to replenish my cabinet of duplicates." For this reason, and from pecuniary anxieties, it is evident that he was quite ready to contemplate a change of residence. For instance, when Prof. Hentz was about taking a professorship in an Alabama university, Dr. Harris was evidently not indisposed to go with him. He wrote March 25, 1829:

"As to the intimation respecting a professor's chair, I can but repeat what I once mentioned, that my qualifications are not adequate; but if the climate should admit, I could prepare myself for the department of obstetrics or materia medica. Some experience for ten years in the former, and my knowledge of botany, and necessary acquaintance with the manipulation of drugs, would not render it difficult to attain, in a short time, a tolerable knowledge of either of these branches."

Two months later (June 5, 1829) he wrote to the same friend:

"I am very desirous to learn the issue of your contemplated change of place. Such are the embarrassments and anxieties of my present situation, that your hints in regard to myself would receive serious consideration; especially if the climate, the professional department and the emolument should coincide with my wishes. You may not know that my friends endeavored, some time ago, to procure for me an appointment as librarian at Harvard University, a situation which would have suited me exactly; but unfortunately the place was pre-engaged."

This refers, doubtless, to the appointment of Mr. Benjamin Peirce to the librarianship in 1826. It would appear from this that Dr. Harris had for some time looked with

hope to this appointment, which he finally received in 1831, on the death of Mr. Peirce. It would also appear that he found the librarianship attractive for its own sake, and not (as it was perhaps viewed by some of his friends) as a stepping-stone toward a professorship of Natural History. Be this as it may, he accepted the post, and held it during the remaining twenty-five years of his life.

No doubt he looked forward with delight to the change. The librarian's salary was low, but the dignity and permanence of the new post must have appeared in agreeable contrast to the struggle for life of a country physician, whose very acquirements as a naturalist may have impeded his professional career. Then the methodical and accurate habits of Dr. Harris promised to make the daily routine of duty agreeable; he had a genuine love of antiquarian research, though always kept under by the greater attractions of natural science; and he might reasonably hope for many books and some leisure. In both he was disappointed; of leisure he had almost none, and of books no liberal supply. The library at the time of his accession numbered but about thirty thousand volumes, though he left it swelled to sixty-five thousand. Its means of increase were then, as now, very small, and the great cost of works on natural history precluded much investment in that direction.

Dr. Harris was appointed ere long to a quasi-scientific post in the college, in addition to his librarianship. The professorship of Natural History was at this time vacant for want of funds, and Dr. A. A. Gould gave, until 1837, an annual course of lectures on this subject to the senior class. On his resignation, Dr. Harris took his place, and had charge of that

department from February 16, 1837, till the appointment of a permanent professor in 1842. I was fortunate enough to be among his pupils. There were exercises twice a week, which included recitations in "Smellie's Philosophy of Natural History," with occasional elucidations and familiar lectures by Dr. Harris. There were also special lectures on Botany. This was the only foothold which Natural History had then secured in what we hopefully called the "university." Even these scanty lessons were, if I rightly remember, a voluntary affair; we had no "marks" for attendance, and no demerits for absence, and they were thus to a merely ambitious student a waste of time, so far as college rank was concerned. Still they proved so interesting that Dr. Harris formed, in addition, a private class in entomology, to which I also belonged. It included about a dozen young men from different college classes, who met on one evening of every week at the room where our teacher kept his cabinet, in Massachusetts Hall. These were very delightful exercises, according to my recollection, though we never got beyond the Coleoptera. Dr. Harris was so simple and eager, his tall, spare form and thin face took on such a glow and freshness, he dwelt so lovingly on antennæ and tarsi, and handled so fondly his little insect-martyrs, that it was enough to make one love this study for life, beyond all branches of Natural Science, and I am sure that it had that effect on me.

As one fruit of these lessons, several of us undertook during the following year to arrange for the Harvard Natural History Society its collection of insects, then very much augmented, and only partially arranged by my predecessor

in the Curatorship of Entomology, Henry Bryant, since well known to the world of science. This task kept us in contact with Dr. Harris; we had the aid of his cabinet in identifying the species; but the more we used this ready assistance, the more profound became the wonder how Dr. Harris himself had identified them. There were no manuals, no descriptions, no figures accessible to us; even in the college library there were only a few books on tropical insects, and a few vast encyclopedias, which appeared to hold everything but what was wanted. It seemed as if a special flight of insects must have come to Dr. Harris from the skies, all ready pinned and labelled. Older heads than ours were equally perplexed, and the mystery was never fairly solved until after the death of our dear preceptor, and the transfer of his cabinet and papers to the Boston Society of Natural History.

It was then apparent by what vast labor Dr. Harris had compiled for himself the literary apparatus of his scientific study. A mass of manuscript books, systematized with French method, but written in the clearest of English handwritings, show how he opened his way through the mighty maze of authorities. First comes, for instance, a complete systematic index to the butterflies described by Godart and Latreille, in the Encyclopédie Méthodique. Every genus or species is noted, with authority, reference and synonymes; the notes being then rearranged alphabetically and pasted into a volume — perhaps three thousand titles in all. This was done in 1835.

Then comes a similar compilation of the Coleoptera from Olivier; twenty foolscap pages, giving genus, species, locality,

and even measurements, to the fraction of an inch. Then there are three manuscript volumes containing an index to the four volumes of Cramer's "Papillons Exotiques"; one devoted to Stoll's "Supplement," and two to Hübner's "Exotische Schmetterlinge." For Drury's "Illustrations of Natural History" there are two of these elaborate indices, made at different periods; one based on the original edition in 1770–3, and the other on Westwood's reprint of 1837. So beautifully executed is all this laborious work, that it is still as easily accessible as print, though the earlier sheets are yellow and torn. The Natural History Society thus possesses not merely the results of Dr. Harris's researches, but the very tools which he himself forged for their prosecution.

This immense preliminary labor always brings with it some compensation to the isolated explorer, in the thorough drill it implies. "Writing maketh an exact man." But the person who will undertake such labor is generally exact by nature, and Dr. Harris, at any rate, needed no such drudgery to fit him for the higher work of science. Yet there is an inestimable moral in his labor for our younger generation of *savans*, and the saying of Rivarol that "genius is only great patience," had never a better illustration.

In this destitution of books and cabinets, there was another compensation which gave to Dr. Harris a more practical satisfaction. The conditions of a new country, implying these drawbacks, imply also a great wealth of material. In older countries it is rare to discover a new species; it is something to detect even a new *habitat*. But these lonely American entomologists seem, as one reads their correspondence, like so many scientific Robinson Crusoes, each with

the insect-wealth of a new island at his disposal. They are monarchs of all they survey. With what affluence they exhibit their dozens of undescribed species; with what autocratic power they divide and recombine genera! How ardently writes Hentz to Harris, "Oh! why must we live at such a distance from each other? What pleasures we might enjoy together." Or, "Mourn no longer for the singleness or solitude of your Amphicoma vulpina! I have found another." Yet they were richer for the loneliness, and perhaps it was better that Massachusetts and Carolina, even in scientific jurisdiction, should remain at a reasonable distance. Had these students shared one entomological region, they would have had less wealth to interchange.

Nothing among the papers of Dr. Harris contains so much of his scientific biography as a letter written by him to Dr. D. H. Storer of Boston, from which I shall therefore take ample extracts.

CAMBRIDGE, Nov. 2, 1836.

Dear Sir: —

Your kind note will cause you the trouble of reading a long answer, if indeed you can spare the time to do so. My plans are by no means so nearly matured as you seem to imagine, nor indeed is there any very great chance of the object of my wishes being speedily accomplished. The want of a manual of American Entomology struck me very forcibly fifteen years ago, when I was turning some of my attention to the study of insects, and this want greatly impeded my progress. There were then very few persons who paid any attention to Entomology in this country; none of them, excepting Prof. Peck, were then known to me; and the information which I could have gathered from him was suddenly lost to me by his death. Sometime afterwards I became known to Mr. Say through our mutual acquaintance, Prof. Nuttall, and a correspondence was continued, at protracted

intervals it is true, between us till his decease. I often urged Mr. Say to prepare a manual which would serve for American insects, as Pursh's Flora and Eaton's Manual did for plants, and he assured me that he was collecting materials for the purpose. The describing of an immense number of new, or supposed new species, occupied all the time that he could give to Entomology, and I do not find among his papers anything like an outline or commencement of the desired work.

In the meanwhile I had formed the idea of a local *fauna insectorum*, which should include only the species common in this vicinity, and I began to write descriptions of these species, but found myself embarrassed for the want of books. This difficulty rather increased, or appeared of more importance, as my knowledge of species was enlarged, and I soon found myself in possession of a very large number of insects, which could not, with any propriety, be arranged in any of the genera described in my books. To supply myself with all the works necessary for determining these species and reducing them to their proper genera, required a much larger sum of money than I could command, and I have been compelled to wait even till this time without having my wants in this respect supplied. In the meanwhile some of my descriptions were published in the "New England Farmer," and the series would have been continued there if I could have hoped to excite any interest in the science among those who had the power, if not the inclination, to aid it.

The lectures which I was called upon to deliver before the Natural History Society in Boston, gave a different direction to my studies for a while; but about that time I wrote an introduction, or rather made something like a systematic abstract from the scientific part of Kirby and Spence's Entomology on the subject of the external anatomy, transformations, and different states of insects; which I supposed it would be necessary to prefix to my local fauna. Additions to this and to the descriptive part of the contemplated work have been made at subsequent periods, but still a large part of the labor remains to be done. I have no idea how large a book it would make when finished, nor do I see any prospect of my being able at present to finish it, and indeed I have nearly abandoned all hope of bringing it to a successful termination.

The difficulties met with, at length led me to think of some means of making Entomology popular, and I looked to the young as the proper subjects to begin with. With the hope that by exciting a taste among children for this branch of natural history, the parents might become interested also, I have rewritten my introduction in plain and simple language, divested as much as possible of all hard words, and intend to add to it brief descriptions of some of our most common insects. This you may think is small business, but I hope it may at least be useful and entertaining to those for whom it is intended.

Dr. Pickering of Philadelphia some months ago urged me to undertake a synopsis of American insects, and said so much on this subject that I was induced to take his proposition seriously into consideration. I then wrote to him that if he would examine Say's insects for me, and answer such enquiries as I might find it necessary to make respecting the species contained in his cabinet, I would undertake to make "a descriptive catalogue of the insects named in the second edition of Prof. Hitchcock's Report on the Geology, etc., of Massachusetts," but I could promise nothing more; for I was determined not to undertake to describe any insects but those which I had before my own eyes. Hereupon Dr. Pickering obtained leave of the Academy of Natural Sciences to send me the whole of Say's collections, only stipulating that I should put them in good order, and return them in a condition to be preserved after I had examined and arranged them. They arrived about the middle of July; but on examination were found to be in a deplorable condition, most of the pins having become loose, the labels detached, and the insects themselves without heads, antennæ and legs, or devoured by destructive larvæ, and ground to powder by the perilous shakings which they had received in their transportation from New Harmony. This irremediable destruction has in great measure defeated my expectation of deriving benefit from examining the specimens and comparing them with those in my own collection, and in that of Prof. Hentz. . . . . .

Mr. Hentz's collection of insects is a most capital and valuable one; it proves on examination to be *far better than I had anticipated.* I am sorely disappointed and mortified in not having been able to raise subscriptions enough to pay for it, and for the beautiful and useful works of Olivier and Voet which accompanied it.

In spite of the closing sentence of this letter, it appears that the books and cabinet of Professor Hentz were finally paid for (the price being $1,350), though mainly through the personal efforts of Dr. Harris. Professor Hentz was of French birth, but American by adoption, and it is surprising to find that his name does not occur in our encyclopedias, except in connection with his wife, well known as a novelist. He has not even the meagre mention which these works assign to those other pioneers of American entomology, Say and the elder Leconte. They, with Melsheimer, were the early compeers of Dr. Harris, whether they were or were not his peers; while his chief aid in collecting seems to have come from his friend and classmate, Rev. L. W. Leonard, of Dublin, N. H. In truth, the number who seriously applied themselves to this science, in those days, might almost have been counted on one's fingers. His foreign correspondence, when it came, gave more substantial assistance, and I especially remember the zeal aroused in Cambridge by the visit of Mr. Edward Doubleday.

Yet the society of accomplished foreign naturalists perhaps made Dr. Harris feel his own loneliness the more. He writes (Sept. 23, 1839) to Mr. Doubleday:

"You have never, and can never know what it is to be alone in your pursuits, to want the sympathy and the aid and counsel of kindred spirits; you are not compelled to pursue science as it were by stealth, and to feel all the time, while so employed, that you are exposing yourself, if discovered, to the ridicule, perhaps, at least to the contempt, of those who cannot perceive in such pursuits any practical and useful results. But such has been my lot,—and you can therefore form some idea how grateful to my feelings must be the privilege of an interchange of views and communication with the more favored votaries of science in another land."

Dr. Harris prepared his catalogues of insects as laboriously as he made his indices of books. They were made on the plan of the card-catalogues now used in libraries, upon uniform pieces of paper, three or four inches square, which he afterwards tied in bundles, and carefully labelled. Each card contained the name of the insect with synonymes and authorities, and the number it bore in his catalogue,—but no description. Mr. Say's collection was catalogued by Dr. Harris in the same manner. Most of this sort of work was apparently done in 1837, and all these manuscripts are in possession of the Boston Society. This institution also holds copies of almost all his entomological letters, transcribed with a neatness and clearness peculiarly his own.

His entomological cabinet,—of which he wrote to Mr. Westermann, February 22, 1842, "My collection is not only the best, but the only general one of North American insects in this country,"—is now in possession of the same association. He wrote of this cabinet to Mr. C. J. Ward of Ohio, March 8, 1837, as follows:

"My object in making a collection, and for this purpose asking the aid of my friends, has not been merely personal gratification; it has been my desire to add something to the cause of science in this country. . . . . Even should death surprise me before the results of my labors are before the public, I shall leave an extensive, well arranged and named collection, which, from the care bestowed upon it, will be in a condition for preservation, and will remain as a standard of comparison when I am gone. You will judge of the importance and value of such a collection when I assure you that Mr. Say's cabinet does not contain one half of the species which he has described; of the insects in it, many are without names, and all more or less mutilated, and so badly preserved that most of them are now absolutely worthless."

The value thus claimed for this collection is not too great. The delicate and systematic care with which Dr. Harris preserved his insects has secured for them a permanent usefulness. It is well known that no class of specimens in Natural History requires such watchful pains. Almost all his American insects remain labelled and arranged as he left them, thus fixing firmly and indisputably every step he made in their classification. His foreign collection was almost ruined before it came into possession of the Natural History Society, and that of Prof. Hentz was long since almost totally destroyed.

Yet with all this care in his indoor labors, no man knew better than Dr. Harris that the best work of a naturalist must be done out of doors. He had few leisure hours, and even the blessed summer vacation must be largely devoted to the annual examination of the dusty library. But his minute observations on insect-transformation still remain something extraordinary, and many an experienced entomologist has wondered how or where Dr. Harris traced from the egg the varied forms of some little insect which others hardly knew in its completeness. His rare skill with the pencil aided him in this work, as in his studies of classification. As he learned to classify butterflies by drawing the nervures of their wings, so he fixed by copying each successive stage of development. His excursions, too, though rare, were effectual; he had the quick step, the roving eye and the prompt fingers of a born naturalist; he could convert his umbrella into a net, and his hat into a collecting-box; he prolonged his quest into the night with a lantern, and into November by searching beneath the bark of trees. Every great discovery was an

occasion for enthusiasm, and it seemed the climax of his life when he found for the first time, on August 5, 1840, the larvæ of the southern butterfly, Papilio Philenor, on a shrub in the Botanic Garden.[1] He had previously written of it to Hentz (Feb. 18, 1838), "this insect must belong to a type of which there is no other in the United States." I very well remember that he gave me one of his few specimens, and when I deposited the lovely butterfly in the cabinet of the Harvard Natural History Society, I felt as if I had founded a professorship.

But the zeal of Dr. Harris was not confined to entomology — it extended to all branches of zoölogy and to botany too. Indeed this was his favorite study next to that of insects, and he left in manuscript an elaborate monograph of the natural order Cucurbitaceæ. I remember the perennial eagerness with which he urged upon us, each spring, to rediscover the Corallorhiza verna in a certain field near the Observatory. It had been found there once, and once only, by my classmate, Dr. Woodward. It had certainly been found — and yet it seemed improbable that it should have been found, and it never was found again — and Dr. Harris's eyes would always kindle when the little flower was mentioned, and he would ponder, and debate, and state over and over again the probabilities and improbabilities, and discuss the possibility of some error in the precise location, and draw little plans of that field and the adjoining fields, and urge us on to the pursuit or cheer us when drooping and defeated, until it seemed as if the quest after the Holy Grail was a

[1] See p. 147 following.

thing insignificant and uninspiring compared with the search for that plain little orchid. This was the true spirit of the observer, — appreciation of the unspeakable value of a fact.

Still the certainty remains that for all productive purposes of Natural History the last fifteen years of his life yielded constantly less and less. Genius works many miracles, but it cannot secure leisure for science to a man who has twelve children, no private means, and the public library of a University to administer. As the library grew larger, his opportunities grew less, and it is pathetic to read in his correspondence the gradual waning of his hopes of release.

He wrote (Nov. 10, 1837) to Dr. Charles Zimmermann, of Columbia, S. C. (the italics being his own):

"I look forward to all your future sendings with much hope, and beg that you will favor me with such insects as you can conveniently part with, as soon as possible. At present I may not have it in my power to make *full and adequate returns:* but *the time may come* when I shall no longer be so closely confined to one spot, and so much absorbed with other duties; and when that time does come, I mean to go forth into the neglected parts of this and the neighboring States, and collect largely of the insect treasures contained in them. Then you shall share fully and freely of my gatherings."

These eager visions faded, and he wrote five years after (Nov. 3, 1842), to Mr. E. C. Herrick, librarian of Yale College, this final abandonment of the hopeless attempt to be librarian and naturalist at the same time:

"The business of the public library of the University takes up nearly all my time, and unless something more favorable turns up, I shall not be

able to pursue the study of natural history any longer. I hope that some others may be found to take up, follow and finish the history of American insects ;—hosts of which are now waiting for a biographer to name and describe their characters."

It is easy to conjecture the circumstance which seemed thus finally to close Dr. Harris's hopes of obtaining leisure for science. The Professorship of Natural History in the University, which had remained vacant for want of funds since 1834, was filled (April 20, 1842) by the appointment of Dr. Asa Gray. During this interval, the duties of the department had been partly discharged by Dr. Harris, and it was inevitable that he and his friends should indulge a hope of his permanent appointment. The matter was the subject of much conversation at the time, and is several times mentioned in his more familiar correspondence. It was fortunate that the very eminent claims of Dr. Gray, and the especial propriety of selecting a botanist to take charge of the Botanical Garden, relieved the appointment from all appearance of discourtesy to Dr. Harris. But all lovers of science must regret that no way was found of securing for its exclusive benefit the maturity of a naturalist so gifted.

In spite of all obstacles, Dr. Harris always contributed very largely to scientific, agricultural and other periodicals, and a catalogue of these papers, more or less complete, is appended to this memoir. But he rarely came before the public for any more extended work. He prepared in 1831 the catalogue of insects appended to Hitchcock's Massachu-

setts Geological Report. In the condition of American science at that day, it was a work of inestimable value, though his only material compensation was one copy of the Report, and several copies of the Appendix. At a later period he was appointed by the State as one of a scientific commission for a more thorough geological and botanical survey. In this capacity he prepared his "Report on Insects Injurious to Vegetation," first published in 1841, reprinted by himself under the name of "Treatise," instead of "Report," in 1842,—and again in a revised form in 1852. The whole sum received by him, from the State, for this labor, was $175. After his death, the book was reprinted by the State, in an admirable form, with engravings, and it is upon it that his scientific reputation will mainly rest.

It is admitted by all who read this treatise that it is almost a model combination of the strictly scientific spirit with the clearest popular statement. In the words of a younger entomologist, writing of Dr. Harris:

"He was remarkably exact in his observations, careful in his statements, and painstaking in a high degree. His generalizations have stood well the tests of subsequent research, and a more extended array of facts. He never lost sight of the end at which he aimed; never allowed undue weight to any set of observations, even when they were his own, and never left any thing to conjecture. His insight into nature and relations of affinity, although they might be based upon a meagre series of natural objects, was truly enviable. Conservative in his methods and tendencies, he was nevertheless quite independent, and had a clear, well-balanced and penetrating mind. His acquaintance with American entomology was broader and more exact than that of any one before or since his day, and yet in nothing that he has written do we find him proclaiming his own discoveries."

His later entomological correspondence bore chiefly on the topics covered by this treatise, as he had not the leisure to enter on new ground. There exists, however, a letter to Mr. Edward Newman, which should here be included, both from its personal interest, and from its expression of opinions on general scientific problems. The letter is in acknowledgment of a work entitled "The System of Nature; an Essay," published in 1843 by that eminent naturalist, and by him dedicated to Dr. Harris.

"CAMBRIDGE, Jan. 7, 1844.

"EDWARD NEWMAN, ESQ.,

"No. 9, Devonshire Street, Bishop's Gate, London.

"*Dear Sir:*—

"On the 23d of December I received the beautiful volume which you have done me the honor to dedicate and send to me, and offer you my sincere and respectful thanks for the same. The copies for the Public Library of Harvard University and for the Boston Society of Natural History, were duly forwarded as soon as received.

"I have often read the very interesting letter which you wrote to me some years ago; as well as your valuable contributions to the Entomological Magazine. These, with your "Sphinx Vespiformis," your Grammar of Entomology, and your very ingenious essay on the System of Nature, are full of instruction.

"In a private course of lectures on Entomology given to some of the students of the University, four years ago, I endeavored to explain your system, and made diagrams for the purpose, some of which still remain hanging in the room where our excellent friend, Mr. Doubleday, saw my collection of insects. I have often wished you would combine in one work all that you have published on the classification of insects, and the characteristics of the groups. Your papers on this subject in the Entomological Magazine, with an abridgement of what is contained in the "Sphinx Vespiformis,"

would form a very useful and acceptable addition to a future edition of your Grammar of Entomology.

"If I cannot give an unqualified assent to all your views, I think them well worthy of attention, consideration and study.

"You have often very happily illustrated what before was obscure, and have pointed out some striking resemblances, or affinities, as it is the fashion to call them. You have proved to my satisfaction the centrality of certain groups or types of form, combining some of the characteristics of the surrounding groups, together with a character peculiarly their own. This, it appears to me, must be the key to affinities, if such exist. That there are really seven great and perfectly natural groups of insects, and that they approach each other, as you have represented, appears undeniable. Divide any one of them, and the parts lose their relative value when compared with the other groups. Whether there ever were, or ever will be, other equally natural groups of insects, and—if so—how they can be connected with your circle, is more than I can tell. It seems to me, however, upon taking a more extended view of nature, that living bodies are infinitely varied in structure, and were I to be required to say in one word, what is the system of nature, I should answer, variety. We see only a part of the series, the beginning and the end are lost to our view—we know only in part what is—we know but little of what has been, and we know nothing of what is to be. And yet to form a perfect, philosophical system, or rather to trace out the whole plan of the Creator, we should have at once before us all the living beings that ever have been, and ever will be created. Hence all our attempts to discover a natural system, either in Zoölogy or Botany, must fall far short of perfection.

"Allow me again to make my acknowledgments for the unmerited honor that you have conferred upon me,—and be assured that such notice from one for whose valuable contributions to science I have a high respect, is a source both of pride and of pleasure to

"Your friend and servant,

"T. W. Harris."

But if this letter shows the maturity of his scientific judgment, another, written in the same year, shows his overtaxed physical condition. It is addressed (January 30, 1844) to Mr. Doubleday of the British Museum, the favorite entomological correspondent of his later years:

"Your letter shows me what I feared would be the case, that the cares and responsibilities of your situation absorb most of your time, and undermine your health. My friend, be warned in season, if it be not now too late, by my own sad experience, that the unremitting devotion to duties in a public establishment will wear out body and spirit, will deprive you of leisure, of necessary exercise and relaxation, and will give you in return only a petty compensation, at the expense of your time, health and happiness. Your account of your own labors, cares and anxieties in the museum, seems to me an echo of my own in the public library of the University, which now for two years has added a double burden to my before overtaxed powers of mind and body."

In spite of this habitual overwork, sometimes leading to nervous exhaustion or severe headaches, the general health of Dr. Harris was good. It was a rare thing for him to be confined to the house by illness. During his later years he had occasional attacks of pain in the chest, which he thought to be pleurisy. On the 9th of November, 1855, he was attacked with pleurisy of the right side, followed by an effusion into the cavity of the chest. This confined him to the house, which he never again left, although it did not prevent him from receiving the visits of his friends. During the month of December he suffered mainly from shortness of breath and weakness; later he had an affection of the veins of the legs, followed by their obstruction. Early in January

of the following year, he had a sudden faintness, from which he hardly rallied, and which he himself thought at the time would be fatal. He died at last from a similar attack on the 16th of January, 1856, at the age of sixty. An hour before his death he had a conversation on library affairs with his assistant and successor, Mr. John L. Sibley,—and then expired, in the act of rising from his bed. The disease proved to be pleurisy, with what is known as *embolism.*

The life of Dr. Harris, with whatever disappointments and drawbacks, must not be regarded as a sad one. It was certainly a great loss both to himself and the world that the maturity of his powers should have been given to anything but Natural History. Yet the work which was assigned him was not uncongenial, except by comparison. As he could not be wholly a naturalist, he found enjoyment in being a librarian. His father had held the same office, almost to the year of his own birth, and he seemed born with the librarian's instinct for alcoves and pamphlets and endless genealogies. He had in preparation a very elaborate genealogical history of the Mason family, and was often consulted as an expert upon such matters. He kept his official records with exquisite accuracy, and described his methods to other librarians as lovingly as if he were describing a chrysalis. To that indeed the College library of those days had much resemblance, nor has its period of active development yet come.

His official cares thus brought their own compensation, and this was yet more true of that home-life which no man ever enjoyed more, though its solicitudes and blessings, as

usual, multiplied together.[1] Constant references and expressions in his letters, in regard to his own family and those of his correspondents, show his affectionateness of disposition and delicate sympathy. I mention this the more, because it may be that the engraving in this volume would give a wrong impression, in this respect, to those who did not know Dr. Harris. There is a certain rigidity about it which belonged to his face, perhaps, when in repose,—the result partly of overwork and partly of the frequent headaches which, in his own words, "kept him always thin." But the moment he spoke, his face had the kindest smile and such a play of sensitive expression that I cannot possibly associate with it anything like sternness.

The eldest son of Dr. Harris (William Thaddeus) was a schoolmate of mine, and had a career somewhat remarkable for the energy and perseverance shown by him in struggling against severe physical infirmities; and preparing himself for Harvard College, where he graduated in 1846, at the age of twenty. In him the antiquarian tastes of the family

[1] The children of Dr. Harris were as follows:

1. William Thaddeus, b. Jan. 25, 1826 [H. C. 1846], d. unmar. Oct. 19, 1854.
2. Sarah Catherine, b. Nov. 7, 1827, d. Sept. 10, 1828.
3. Harriet Gardner, b. Jan. 2, 1829, mar. Prof. George Phillips Bond of the Astronomical Observatory of H. C., and d. Dec. 12, 1858, leaving issue.
4. Emma Forbes, b. Dec. 16, 1830.
5. Catherine } b. Oct. 2, 1832, } resident of Boston.
6. Charles }
7. Amos Holbrook, b. July 9, 1834, resident of Boston.
8. Clarendon, b. Mar. 24, 1836, resident of Laporte, Ind.
9. Edward Doubleday, b. Sept. 20, 1839, resident of Cambridge.
10. Thomas Robinson, b. June 15, 1842 [H. C. 1863], clergyman of Prot. Epis. Church, resident of Long Island, N. Y.
11. Elizabeth, b. Nov. 1, 1844.
12. Sarah Harriet, b. Sept. 23, 1849.

passed to a third generation; he prepared with assiduous labor, while in college, a volume containing the quaint epitaphs in the Cambridge churchyard; he had also prepared for publication a transcript of the still quainter inscriptions of the old Watertown burial-ground, a work soon to be published, under the supervision of his younger brother; he had projected a continuation of "Prince's Chronology," and at the time of his early death in 1854, was already a Corresponding Member of several European archæological societies. He was admitted to the Suffolk Bar a few months before his death, having pursued his legal studies in Cambridge.

The scientific portion of the library of Dr. Harris—including about two hundred and fifty volumes—was purchased after his death by John P. Cushing, Esq., of Watertown,—who was also the largest contributor for the purchase of his cabinet and manuscripts, which also became the property of the Boston Society of Natural History. The following description of the library was orally given to the Society by the Curator of Entomology, on its reception:

"Among the volumes is one containing all the rarer tracts of Say, most of which are extremely scarce; among them his New Harmony pamphlets, one of which (on the Heteropterous Hemiptera of North America) is probably the only copy in this country, if indeed it can be found anywhere else. There is a volume of colored drawings by John Abbot, of the Lepidoptera and Coleoptera of Georgia, presented to Dr. Harris by Edward Doubleday, Esq., of England, containing all the originals of the drawings in 'Abbot and Smith's rarer Lepidopterous Insects of Georgia,' besides many others yet unpublished. Most of the important European works are here,—such as those of Fabricius, Herbst, Dejean, Boisduval, Macquart, Wiedemann, Audinet-Serville, Sahlberg, Coquebert, Schönherr, Gory and Percheron,

Aubé, Laporte and Gory, Westwood, Knoch's 'Neue Beytrage,' and the 'Wiener Verzeichniss'; together with nearly complete sets of most of the publications of entomological societies and entomological periodicals. Some of these are from the library of Mr. Say, and contain a few of his notes; many were once possessed by Prof. Peck, the predecessor of Dr. Harris, and one is from the library of Dru Drury; and nearly all are enriched by copious notes by Dr. Harris."

At a meeting of the American Academy of Arts and Sciences, held February 12, 1856, a series of resolutions was presented by Dr. A. A. Gould, one of which included the following summary of the services of Dr. Harris.

"*Resolved*, That as a bibliographer and an archæologist, in relation especially to the history of our own country, he held a distinguished rank; that as a naturalist he has not been surpassed by any of his countrymen, and has exhibited a patience, thoroughness, and accuracy of observation in the various departments of Natural History, a truthfulness in the delineations, both of his pencil and his pen, and a singular facility in employing language intelligible to the common reader, and at the same time fulfilling all the requirements of science, which render him a model for the interrogator of Nature; and that, through a long life of untiring industry, he has accumulated and published a mass of original observations, of an eminently practical bearing, which have won for him high consideration, both at home and abroad, and will constitute for him an enduring monument."

It appears by the record that "the resolutions were seconded by Professor Louis Agassiz, who added that Dr. Harris had had few equals, even if the past were included in the comparison"; and that Dr. A. A. Gould was appointed to prepare a memoir of the life and labors of Dr. Harris, for publication by the Academy. It is greatly to be regretted that this work was never accomplished.

The steady growth of Dr. Harris's reputation is not due alone to his position as pioneer in American science during its barest period. It has grown because he proves to have united qualities that are rare in any period. He combined a fidelity that never shrank from the most laborious details with an intellectual activity that always looked beyond details to principles. No series of observations made by him ever needed revision or verification by another; and yet his mind always looked instinctively towards classification and generalization. He had also those scientific qualities which are moral qualities as well; he had the modesty and unselfishness of science, and he had what may be called its chivalry. He would give whole golden days of his scanty summer vacations to arranging and labelling the collections of younger entomologists. And it roused all the wrath of which his soul was capable when even a rival was wronged, as when Dejean ignored Say's descriptions, because he had not learned English enough to read them.

I remember his once holding up to us, as the true type of a scientific reputation, that of Robert Brown, supreme among botanists, unknown even by name to all the world beside. More fortunate than Robert Brown, Dr. Harris combined with this high aristocracy of science a peculiar capacity of practical application, and has left a rare example of the scientific and the popular spirit in one.

LIST OF THE WRITINGS

OF

THADDEUS WILLIAM HARRIS, M.D.

1. Upon the natural history of the salt-marsh caterpillar (Arctia pseudermina), with a plate. Mass Agric. Rep., Vol. VII, No. IV, pp. 322–331, June, 1823.

(*a*) Reproduced without figures in the N. Engl. Farm., Vol. I, No. XLIX, pp. 385–386, July 5, 1823.

2. Description of four native species of the genus Cantharis. Bost. Journ. Phil. and Arts, Vol. I, pp. 494–502, 1824.

(*a*) Ditto in the New Engl. Journ. of Med. Surg., etc., Vol. XIII, No. III, pp. 243–250, July, 1824.

3. Caterpillars (Clisiocampa americana). N. Engl. Farm., Vol. IV, No. XLV, p. 354, June 2, 1826.

4. Peach tree insect (Ægeria persicæ). N. Engl. Farm., Vol. V, No. V, p. 33, Aug. 25, 1826.

(*a*) Reproduced in part in Harr., Entom. Corresp., p. 359.

5. Insects which destroy cocoons of silk worms (Dermestes lardarius). N. Engl. Farm., Vol. V, No. V, p. 33, Aug. 25, 1826.

6. Trees. Abstract of a report on the state of the elm tree in St. James and Hyde Parks, by W. S. MacLeay (with additional remarks). N. Engl. Farm., Vol. V, No. XXII, pp. 169–171, Dec. 22, 1826.

7. Dr. Hunt's insect (Tremex columba). N. Engl. Farm., Vol. V, No. XXVII, p. 211, Jan. 26, 1827.

(*a*) Reproduced in part in Harr., Entom. Corresp., p. 360.

8. Descriptions of three species of the genus Chremastocheilus. Journ. Acad. Nat. Sci. Philad., Vol. V, pp. 381–389, Feb., 1827.

9. Minutes towards a history of some American species of Melolonthæ, particularly injurious to vegetation. Mass. Agric. Rep., Vol. X, No. I, pp. 1–12, July, 1827.

(*a*) Reproduced in the N. Engl. Farm., Vol. VI, No. II, pp. 9–10, Aug. 3, 1827; No. III, pp. 18–19, Aug. 10, 1827.

10. Insects on peach trees (Aphides). N. Engl. Farm., Vol. VI, No. L, p. 393, July 4, 1828.

11. Insects (Gastropacha velleda, Ægeria cucurbitæ, Arctia textor). N. Engl. Farm., Vol. VII, No. V, pp. 33, 34, Aug. 22, 1828.

(*a*) Reproduced in part in Harr., Entom. Corresp., p. 360.

12. The curculio, or worm in fruit (Conotrachelus nenuphar). N. Engl. Farm., Vol. VII, No. XI, pp. 81–82, Oct. 3, 1828.

13. Contributions to Entomology [No. I.]. N Engl. Farm., Vol. VII, No. XII, pp. 90–91, Oct. 10, 1828.

(*a*) Reproduced in Harr., Entom. Corresp., pp. 337–341.

14. Contributions to Entomology, No. II. N. Engl. Farm., Vol. VII, No. XV, pp. 117–118, Oct. 31, 1828.

(*a*) Reproduced in Harr., Entom. Corresp., pp. 341–344.

15. Contributions to Entomology, No. III. N. Engl. Farm., Vol. VII, No. XVI, pp. 122–123, Nov. 7, 1828.

(*a*) Reproduced in Harr., Entom. Corresp., pp. 344–346.

16. Contributions to Entomology, No. IV. N. Engl. Farm., Vol. VII, No. XVII, p. 132, Nov. 14, 1828.

(*a*) Reproduced in Harr., Entom. Corresp., pp. 346–348.

17. Contributions to Entomology, No. V. N. Engl. Farm., Vol. VII, No. XX, p. 156, Dec. 5, 1828.

(*a*) Reproduced in Harr., Entom. Corresp., pp. 348–351.

18. Contributions to Entomology, No. VI. N. Engl. Farm., Vol. VII, No. XXI, p. 164, Dec. 12, 1828.

(*a*) Reproduced in Harr., Entom. Corresp., pp. 351–354.

19. Insects on fruit trees (Cocci). N. Engl. Farm., Vol. VII, No. XXIV, pp. 186–187, Jan. 2, 1829.

20. Additional remarks on the bark louse or Coccus. N. Engl. Farm., Vol. VII, No. XXXVII, p. 289 (wood cuts), April 3, 1829.

21. American turnip butterfly (Pontia oleracea). N. Engl. Farm., Vol. VII, No. LI, p. 402, July 10, 1829

(*a*) Reproduced in part in Harr., Entom. Corresp., p. 361.

22. Corrections and additions for the "Contributions to Entomology." N. Engl. Farm., Vol. VIII, No. I, pp. 1–2, July 24, 1829.

(*a*) Reproduced in part in Harr., Entom. Corresp., pp. 354–355.

23. Contributions to Entomology, No. VII. N. Engl. Farm., Vol. VIII, No. I, pp. 2–3, July 24, 1829.

(*a*) Reproduced in Harr., Entom. Corresp., pp. 359–359.

24. Insects (Ægeria pyri, Ichneumon hordei). N. Engl. Farm., Vol. IX, No. I, pp. 1–2, July 23, 1830.

(*a*) Reproduced in part in Harr., Entom. Corresp., p. 361.

25. Extracts from a paper entitled "Some account of the insect known by the name of the Hessian Fly, and of a parasitic insect that feeds on it, by Thomas Say" (with additional remarks). N. Engl. Farm., Vol. IX, No. II, p. 9, July 30, 1830.

26. Locust (Locusta carolina, Pterophylla concava, Tettigonia vitis,

Cicada septemdecim). Encycl. Amer., Vol. VIII, pp. 40–43. 8vo. Philadelphia, 1831.

27. A discourse delivered before the Massachusetts Horticultural Society, on the celebration of its fourth anniversary, Oct. 3, 1832, pp. 54; in a pamphlet entitled: Fourth Anniversary of the Massachusetts Horticultural Society. 8vo. Cambridge, 1832.

(*a*) Reproduced in N. Engl. Farm., Vol. XI, 1833. No. XXVI, p. 204, Jan. 9; No. XXVII, pp. 212–213, Jan. 16; No. XXVIII, pp. 200–201, Jan. 23; No. XXIX, pp. 225–226, Jan. 30; No. XXX, pp. 236–237, Feb. 6; No. XXXI, pp. 244–245, Feb. 13; No. XXXII, pp. 252–253, Feb. 20.

28. Report on the Geology, Mineralogy, Botany and Zoölogy of Massachusetts, by Prof. Hitchcock. 8vo. Amherst, 1833. Part VIII, Insects. pp. 566–595.

(*a*) Second edition of the same, corrected and enlarged. 8vo. Amherst, 1835. Part VIII, Insects. pp. 553–602.

(*b*) The latter part of (*a*), published separately at the same time, under the title, — Catalogue of the Animals and Plants of Massachusetts, with a copious index. 8vo. Amherst, 1835. Part VIII, Insects. pp. 33–82.

29. On a parasite of the honey bee. Hort. Reg. and Gard. Mag., Vol. I, pp. 44–45, Feb., 1835.

(*a*) Reproduced in N. Engl. Farm., Vol. XIII, No. XXX, p. 233, Feb. 4, 1835.

30. Upon the economy of some American species of Hispa. Bost. Journ. Nat. Hist., Vol. I, No. II. pp. 141–151 (wood cuts), 1835; read Feb. 18.

31. Characteristics of some previously described North American Coleopterous insects, and descriptions of others which appear to be new, in the collection of Mr. Abraham Halsey. Trans. Nat. Hist. Soc. Hartf., No. I, pp. 65–91 (with a colored plate), 1836. Communicated Dec. 23, 1835.

32. Report of the Commissioners on the Zoölogical Survey of the State (containing) Dr. Harris's Report (on Coleoptera). pp. 57–104. Mass. House Document, No. 72. 8vo. April, 1838.

33. Remarks upon Scarabæus goliatus, and other African beetles allied to it. Journ. Essex Co. Nat. Hist. Soc., Vol. I, No. II, pp. 101–107. 8vo. Salem, Mass, 1839.

34. Remarks upon the North American insects belonging to the genus Cyrchus of Fabricius, with descriptions of some newly detected species. Bost. Journ. Nat. Hist., Vol. II, No. II, pp. 218–204, Feb. 1839; read Aug. 15, 1838.

35. Worms in seed corn (Butalis cerealella). Yankee Farmer, Vol. V, No. VI, p. 43, Feb. 9, 1839.

36. Descriptive catalogue of the North American Insects belonging to the Linnæan genus Sphinx in the cabinet of the author. Amer. Journ. Sc. and Arts, Vol. XXXVI, No. II, pp. 282–320, July, 1839.

37. A Report on the Insects of Massachusetts, injurious to vegetation, published agreeably to an order of the Legislature, by the Commissioners on the Zoölogical Survey of the State. 8vo. pp. viii, 459. Cambridge: Folsom, Wells & Thurston, 1841.

(*a*) Another impression of the same, printed at the charge of the author, entitled — A Treatise on some of the Insects of New England, which are injurious to vegetation. 8vo. Cambridge: published by John Owen, 1842.

(*b*) A Treatise on some of the Insects of New England, which are injurious to vegetation; second edition. 8vo. pp. viii, 513. Boston: printed by White & Potter, 1852.

(*c*) A Treatise on some of the Insects injurious to vegetation. Third Edition (posthumous; illustrated by eight coloured steel plates and two hundred and seventy-eight wood cuts; edited by Charles L. Flint.) 8vo. pp. ix, 640. Boston, 1862.

[I have thought it unnecessary to give any references to the numerous extracts from, or reviews of, this work, which have appeared in various places.]

38. Wheat insects (Calandra granaria, Trogosita mauritanica, Tinea granella, Œcophora cerealella). N. Engl. Farm., Vol. XIX, No. XXXVIII, p. 300, March 24, 1841.

39. Wheat insects, continued (Cecidomyia tritici). N. Engl. Farm., Vol. XIX, No. XXXIX, pp. 306 307, March 31, 1841.

40. Memorandum on the larva of Papilio Philenor. Newman's Entomologist, Part II, No. IV, pp. 60–61, April, 1841.

41. Remarks on some North American Lepidoptera, by Edward Doubleday, Esq., including a communication from T. W. Harris, M. D., of Boston, U. S. (Dryocampa? -Saccophora- Melsheimeri). Newm. Ent., No. VII, pp. 99–191 (wood cuts), May, 1841.

42. Plum tree grubs. N. Engl. Farm., Vol. XIX, No. LI, p. 405 (wood cuts), June 23, 1841.

43. Apple tree borer (Saperda bivittata). Mass. Ploughm., Vol. I, No. XVII (wood cut), Jan. 22, 1842.

(*a*) Reproduced in N. Engl. Farm., Vol. XX, No. XXXIII, pp. 260–261, Feb. 16, 1842.

44. The squash vine destroyer (Ægeria cucurbitæ). N. Engl. Farm., Vol. XX, No. XXXIII, p. 260 (wood cut), Feb. 16, 1842.

45. Squash vine destroyer (Ægeria cucurbitæ). Mass. Ploughm., Vol I, No. XXXVII, June 11, 1842.

46. A new disease of the plum (Thrips). Hov. Mag. Hort., Vol. VIII, pp. 247–248, July, 1842.

47. Blight beetle (Tomicus pyri). Mass. Ploughm., Vol. II, No. XXXVIII, June 17, 1843.

(*a*) Reproduced in N. Engl. Farm., Vol. XXII, No. III, p. 21, July 19, 1843.

48. The disease of the sycamore tree (Tingis, Noctuæ). N. Engl. Farm., Vol. XXI, No. L, p. 406, June 21, 1843.

49. Apple worm, curculio, plum grub (Carpocapsa pomonella, Conotrachelus nenuphar). N. Engl. Farm., Vol. XXII, No. II, p. 13, July 12, 1843.

50. Description of an African beetle allied to Scarabæus polyphemus, with remarks upon some other insects of the same group (extracts). Proc. Bost. Soc. Nat. Hist., Vol. I, pp. 151–153; read Nov. 1, 1843 (signatures Nov. and Dec. 1843).

51. Description of an African beetle allied to Scarabæus polyphemus, with remarks upon some other insects of the same group (with a copper plate). Bost. Journ. Nat. Hist., Vol. IV, No. IV, pp. 397–405, Jan., 1844.

52. Coated Saperda of the linden tree (Saperda vestita). Farm. Cab., Vol. VIII, No. VII, pp. 213–214, Feb. 15, 1844.

53. Some account of the insect that attacks the grape vine (Procris americana). Hov. Mag. Hort., Vol. X, pp. 201–205 (wood cuts). June, 1844.

54. A new depredator of the orchard (Clisiocampa sylvatica). N. Engl. Farm., Vol. XXII, No. LII, p. 412, June 26, 1844.

55. Destructive insects on peach trees and grape vines at Nantucket (Cocci). N. Engl. Farm., Vol. XXIII, No. I, pp. 4–5, July 3, 1844.

56. Cucumber skippers (Smynthurus cucumeris). Mass. Ploughm., Vol. III, No. XLII (wood cuts), July 20, 1844.

(*a*) Reproduced in Harr., Entom. Corresp., p. 362.

57. Remarks upon Saperda vestita, the borer of the Linden tree, with extracts from letters upon the same insect. Hov. Mag. Hort., Vol. X, pp. 311, 330–333 (wood cuts), Sept. 1844.

58. Insects in the corn (Butalis cerealella). Farm. Cab., Vol. XI, No. IV, pp. 106–107, Nov. 16, 1846.

59. Microgasters. Bost. Cult., Vol. IX, No. XVIII, p. 138, May 1, 1847.

60. On the blights of the pear tree (Tomicus pyri). Down. Hort., Vol. II, No. VIII, pp. 365–367, Feb. 1848.

61. Canker worms (Anisopteryx vernata). Prairie Farm., Vol. VIII, No. VI, pp. 172–173, June, 1848.

(*a*) Reproduced in Mass. Ploughm., Vol. VII, No XXXIX, June 24, 1848.

62. The potter wasp (Eumenes fraterna). Bost. Cult., Vol. X, No. XXIX, p. 225 (wood cut), July 15, 1848.

63. Correspondence on the black wart of the plum tree (Cicada). Down. Hort., Vol. III, pp. 277–279, Dec., 1848.

64. Canker worms (Anisopteryx vernata). Bost. Cult., Vol. XI, No. XLVII, p. 376, Nov. 24, 1849.

65. Termites. New Orleans Picayune, January, 1850.[1]

66. Description of some species of Lepidoptera from the northern shores of Lake Superior; in Lake Superior, by Louis Agassiz (lithographic plate). 8vo. Boston, 1850. Art. IX, pp. 386–394, pl. vii.

67. Saw-fly of the raspberry, Selandria (Hoplocampa) rubi (in a letter to Miss Darling). N. Engl. Farm., n. s., Vol. II, No. II, p. 33 (wood cuts), Jan. 19, 1850.

68. Insects on potatoes (Baridius trinotatus). N. Engl. Farm., n. s., Vol. II, No. XIII, p. 204, June 22, 1850.

69. Potato bug (Cantharis vittata). Prairie Farm., Vol. X, No. VIII, p. 247, Aug., 1850.

70. Injurious insects (Conotrachelus nenuphar, Carpocapsa pomonella, Aphides, Clisiocampa americana, Anisopteryx vernata, Macrodactylus subspinosus). N. Engl. Farm., n. s., Vol. II, No. XVI, p. 252, Aug. 3, 1850.

71. The cranberry worm. N. Engl. Farm., n. s., Vol. II, No. XXII, p. 348, Oct. 26, 1850.

72. Canker worms (Anisopteryx vernata). Mass. Ploughm., Vol. X, No. VIII, Nov. 23, 1850.

73. Canker worms (Anisopteryx vernata). Mass. Ploughm., Vol. X, No. XXXIII, May 17, 1851.

74. The currant tree borer (Ægeria tipuliformis). Hov. Mag. Hort., Vol. XVII, pp. 241–244 (wood cut), June, 1851.

75. Plum weevils (Conotrachelus nenuphar). Bost. Cult., Vol. XIII, No. XXIV, p. 187, June 14, 1851.

(*a*) On the curculio. Down. Hort., Vol. VI, p. 341, July, 1851.

76. Letter on potato rot. Salem Obs., Vol. XXIX, No. XXVIII, July 12, 1851.

(*a*) Reproduced in Bost. Cult., Vol. XIII, No. XXIX, p. 228, July 19, 1851.

(*b*) Insects not the cause of potato rot. N. Engl. Farm., n. s., Vol. III, No. XVI. pp. 259–260, Aug. 2, 1851.

77. A new insect depredator (Capsus quadrivittatus). N. Engl. Farm., Vol. III, No. XVII, p. 268, Aug. 16, 1851.

[1] I have not seen this paper. It is thus referred to by Mr. Thomas Affleck of Mississippi, in a letter to Dr. Harris, dated Jan. 23, 1850. "I send you herewith a copy of the number of the New Orleans Picayune, our most influential Southern paper, which contains your article on the Termites I sent you." The specimens were sent to Dr. Harris in a letter dated Nov. 10, 1849; and which bears the memorandum of Dr. Harris, "Answered Nov. 29, Dec. 20, 1849."

78. The potato disease not caused by insects (in a communication to J. W. Proctor). N. Engl. Farm., n. s., Vol. III, No. XVIII, p. 287, Aug. 30, 1851.

79. Insects on the potato vine (Aphides, Phytocoris lineolaris, Criocerus trilineata, Galeruca vittata, Haltica striolata, Scatophaga postilena, Sphinx quinquemaculata, Baridius trinotatus). Journ. Agric., Vol. I, No IV, pp. 99–102, Sept. 3, 1851.

80. Chinch bug (Rhyparochromus devastator). Alb. Cult., Vol. VIII, No. XII, pp. 402–403, Dec., 1851.

81. On Cincindelæ. Fam. Vis., Vol. II, No. XXXIX, p. 305 (wood cuts), Feb. 3, 1852.

82. Canker worms (A. vernata). N. Engl. Farm., n. s., Vol. IV, No. IV, pp. 155–156, April, 1852.

83. Letter to Dr. Princle, giving a history of his report. Fam. Vis., Vol. II, No. L, p. 398, April 20, 1852.

84. The joint-worm (Eurytoma hordei). N. Engl. Farm., n. s., Vol. IV, No. VIII, pp. 385–386, Aug., 1852.

85. The oak pruner (Stenocorus putator). N. Engl. Farm., n. s., Vol. IV, No. IX, p. 425, Sept., 1852.

86. The oak pruner. N. Engl. Farm., n. s., Vol. IV, No. X, p. 453, Oct., 1852.

87. Insects in the wheat (Eurytoma hordei). Journ. Agric., Vol. III, No. X, pp. 290–291, April, 1853.

88. Palmer worm (Rhinosia pometella). Cambridge Chronicle, Vol. VIII, No. XXX, July 23, 1853.

(*a*) Reproduced in Trans. New York St. Agric. Soc., Vol. XIII, pp. 190–192, 1854. (See No. 92.)

89. The palmer worm. N. Engl. Farm., n. s., Vol. V, No. VIII, pp. 370–371, Aug., 1853.

90. The rosy Hispa and the drop worm (Hispa rosea, Oiketicus coniferarum). Down. Hort., Vol. VIII, pp. 461–464 (wood cuts), Oct., 1853.

91. Report on some of the diseases and insects affecting fruit trees and vines. Proc. Amer. Pomol. Soc., pp. 210–218, 1854.

(*a*) Reprinted under the title — Report on insects and diseases injurious to vegetation. 8vo. Boston, 1854. pp. 11.

(*b*) Reproduced in Journ. U. S. Agric. Soc., 1854, pp. 197–210.

92. Letter from Dr. Harris (Ithycerus noveboracencis). Trans. N. Y. St. Agric. Soc., Vol. XIII, pp. 188–189, 1854.

(*a*) Reprinted with 88 (*a*) and other matter as — Apple tree pests, pp. 11–13. 88 (*a*) formed pp. 13–16.

93. Description of Rhinosia pometella Harris. Proc. Bost. Soc. Nat. Hist., Vol. IV, pp. 349–351; read July 20, 1853.

94. Extract of a letter to Dr. Kirtland, from Dr. Thaddeus W. Harris, dated Cambridge, March 13, 1854 (Vanessa Milberti). Ann. of Sc., Vol. II, No. IV, p. 100, April, 1854.

95. Note upon the insects injurious to the roots of the cultivated grape vines in North Carolina; in a pamphlet entitled,—The grape vine borer; in a communication on the grape vine, by Dr. E. Mitchell, in the Raleigh Register for April 5, 1854. 8vo. pp. 6–7.

96. Larvæ of the crane fly (Tipula). N. Engl. Farm., Vol. VI, No. V, p. 210, May, 1854.

97. Canker worms (A.vernata). N. Engl. Farm., n. s., Vol. VI, No. VIII, p. 363, Aug. 1854.

98. The Cetonia Inda. N. Engl. Farm., n. s., Vol. VI, No. X, pp. 457–458, Oct., 1854.

99. The Indian Cetonia. N. Engl. Farm., n. s., Vol. VI. No. X, p. 485, Oct., 1854.

100. The measure worm (Geometra niveosericearia). Hov. Mag. Hort., Vol. XXI, pp. 418–423 (wood cut), Sept., 1855.

101. Rose bug (Macrodactylus subspinosus). Bost. Cult., Vol. XVII, No. XXXVI, p. 283, Sept. 8, 1855.

102. Observations on the transformations of the Cecidomyiæ (posthumous). Proc. Bost. Soc. Nat. Hist., Vol. VII, pp. 179–183.

103. On Cicindela Hentzii (posthumous). Proc. Bost. Soc. Nat. Hist., Vol. VII, pp. 185–189.

104. On the synonymy of three North American butterflies (Danais Berenice Cramer, Danais Erippus Cramer and Limenitis Misippus Fabr.) (posthumous). Proc. Bost. Soc. Nat. Hist., Vol. VII, pp. 189–190.

105. Description of Hoplocampa rubi (posthumous). Proc. Bost. Soc. Nat. Hist., Vol. VII, pp. 235–236.

106. The Entomological Correspondence of Thaddeus William Harris, edited by Samuel H. Scudder. Occ. Papers Bost. Soc. Nat. Hist., I (with a portrait, four steel plates and fifty-four wood cuts). 8vo. pp. xlvii, 375. Boston, 1869.

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107. Description of a nondescript species of the genus Condylura (C. prasinata). Bost. Journ. Phil. and Arts, Vol. II, No. VI, pp. 580–583, 1825.

108. Free Martins; in a letter from Hon. John Welles. Bost. Med. and Surg. Journ., Vol. III, No. XV, pp. 239–240, May 25, 1830.

(*a*) Reproduced in N. Engl. Farm., Vol. IX, No. VIII, pp. 61–62, Sept. 10, 1830.

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109. List of native plants discovered growing near Boston, the present season; in a letter read before the Massachusetts Horticultural Society. Hov. Mag. Hort., Vol. VI, No. VII, pp. 245–247, July, 1840.

110. Custard squash. N. Engl. Farm., n. s., Vol. III, No. IV, p. 59 (wood cut), Feb. 15, 1851.

111. Acorn squash. N. Engl. Farm., n. s., Vol. III, No. XXIII, pp. 366–367, Nov. 8, 1851.

112. Pumpkins, Squashes. N. Engl. Farm., n. s., Vol. IV, No. II, pp. 58–59, Feb., 1852.

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113. The late Dr. Holbrook. Bost. Med. and Surg. Journ., Vol. XXVI, No. XXIII, pp. 358–360, July 13, 1842.

114. Notes on the Josselyn Family, of Massachusetts. N. Engl. Hist. and Gen. Reg., Vol. II, No. III, pp. 306–310, July, 1848.

PERIODICAL WORKS REFERRED TO IN THE PREVIOUS LIST.

1. Massachusetts Agricultural Repository and Journal, Vols. VII, X. 8vo. Boston, 1823, 1827.

2. New England Farmer. Vols. I, IV–IX, XI, XIII, XIX–XXIII. 4to. Boston, 1823, 1826–30, 1833, 1835, 1841–1844. Ditto. n. s., Vols. II–VI. 8vo. Boston, 1850–1854.

3. Boston Journal of Philosophy and the Arts. Vols. I, II. 8vo. Boston, 1824–1825.

4. New England Journal of Medicine, Surgery, and collateral branches of Science. Vol. XIII. 8vo. Boston, 1824.

5. Journal of the Academy of Natural Sciences of Philadelphia. Vol. V. 8vo. Philadelphia, 1827.

6. New England Historical and Genealogical Register. Vol. II. 8vo. Boston, 1848.

7. Boston Journal of Natural History. Vols. I, II, IV. 8vo. Boston, 1835, 1839, 1844.

8. Proceedings of the Boston Society of Natural History. Vols. I, IV, VII. 8vo. Boston, 1843, 1854, 1860.

9. Horticultural Register and Gardener's Magazine. Vol. I. 8vo. Boston, 1835.

10. Transactions of the Natural History Society of Hartford. No. I. 8vo. Hartford, Conn., 1836.

11. Yankee Farmer. Vol. V. 8vo. Boston, 1839.

12. Journal of the Essex County Natural History Society. Vol. I. 8vo. Salem, Mass., 1839.

13. American Journal of Science and Arts. Vol. XXXVI. 8vo. New Haven, 1839.

14. Newman's Entomologist. 8vo. London, 1841.

15. Massachusetts Ploughman. Vols. I–III, VII, X. Folio. Boston, 1842–1844, 1848, 1850, 1851.

16. Hovey's Magazine of Horticulture. Vols. VI, VIII, X, XXI. 8vo. Boston, 1840, 1842, 1844, 1855.

17. Farmer's Cabinet. Vols. VIII, XI, XVII. 8vo. Philadelphia, 1844, 1846, 1851.

18. Boston Cultivator. Vols. IX–XI, XIII, XVII. Folio. Boston, 1847–1849, 1851, 1855.

19. Downing's Horticulturalist. Vols. II, III, VI, VIII. 8vo. New York, 1848, 1851, 1853.

20. Prairie Farmer. Vols. VIII, X. 8vo. Chicago, 1848, 1850.

21. Boston Medical and Surgical Journal. Vols. III, XXVI. 8vo. Boston, 1830, 1842.

22. New Orleans Picayune. Jan., 1850.

23. Salem Observer. Vol. XXIX. Folio. Salem, Mass., 1851.

24. The Journal of Agriculture. Vols. I, III. 8vo. Boston, 1851, 1853.

25. Albany Cultivator. Vol. VIII 8vo. Albany, 1851.

26. Family Visitor. Vol. II. Folio. Cleveland, Ohio, 1852.

27. Cambridge Chronicle. Vol. VIII. Folio. Cambridge, 1853.

28. Proceedings of the third session of the American Pomological Society at their fifth meeting held in Boston. 8vo. Boston, 1854.

29. Annals of Science. Vol. II. 8vo. Cleveland, Ohio, 1854.

30. Journal of the United States Agricultural Society for 1854. 8vo. Boston, 1855.

31. Transactions of the New York State Agricultural Society. Vol. XIII. 8vo. Albany, 1854.

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